

Amendments to the Claims

1. (Previously Amended) A cDNA encoding a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequence shown in SEQ ID NO:12 and (b) the amino acid sequence encoded by a cDNA insert contained within plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433).
2. (Original) The cDNA of claim 1 which comprises the nucleotide sequence shown in SEQ ID NO:11.
3. (Original) The cDNA of claim 1 which consists of the nucleotide sequence shown in SEQ ID NO:11.
4. (Original) The cDNA of claim 1 which comprises the cDNA insert of plasmid pCRII-TMSP3.
5. (Original) The cDNA of claim 1 which consists of the cDNA insert of plasmid pCRII-TMSP3.
6. (Previously Amended) An expression vector comprising a polynucleotide which encodes a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequence shown in SEQ ID NO:12 and (b) the amino acid sequence encoded by a cDNA insert contained within plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433).
7. (Original) The expression vector of claim 6 wherein the polynucleotide comprises the nucleotide sequence shown in SEQ ID NO:11.

8. (Original) The expression vector of claim 6 wherein the polynucleotide consists of the nucleotide sequence shown in SEQ ID NO:11.

9. (Original) The expression vector of claim 6 wherein the polynucleotide comprises a coding sequence of the cDNA insert of plasmid pCRII-TMSP3.

10. (Original) The expression vector of claim 6 wherein the polynucleotide consists of a coding sequence of the cDNA insert of plasmid pCRII-TMSP3.

11. (Previously Amended) A host cell comprising an expression vector which encodes a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequence shown in SEQ ID NO:12 and (b) the amino acid sequence encoded by a cDNA insert contained within plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433).

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12. (Original) The host cell of claim 11 wherein the polynucleotide comprises the nucleotide sequence shown in SEQ ID NO:11.

13. (Original) The host cell of claim 11 wherein the polynucleotide consists of the nucleotide sequence shown in SEQ ID NO:11.

14. (Original) The host cell of claim 11 wherein the polynucleotide comprises a nucleotide coding sequence of the cDNA insert of plasmid pCRII-TMSP3.

15. (Original) The host cell of claim 11 wherein the polynucleotide consists of a nucleotide coding sequence of the cDNA insert of plasmid pCRII-TMSP3.

16-21. (Canceled)

22. (Previously Amended) A method of producing a polypeptide comprising an amino acid sequence selected from the group consisting of (a) the amino acid sequence shown in SEQ ID NO:12 and (b) the amino acid sequence encoded by a cDNA insert contained within plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433), comprising the steps of:

culturing a host cell comprising an expression vector that encodes the polypeptide under conditions whereby the polypeptide is expressed; and
isolating the polypeptide.

23. (Original) The method of claim 22 wherein the expression vector comprises the nucleotide sequence shown in SEQ ID NO:11.

24. (Original) The method of claim 22 wherein the expression vector comprises a coding sequence of the cDNA insert of plasmid pCRII-TMSP3.

25-68. (Canceled)

69. (Currently Amended) An isolated polynucleotide selected from the group consisting of: (a) a polynucleotide encoding a protein that comprises the amino acid sequence of SEQ ID NO:12, (b) a polynucleotide comprising the sequence of SEQ ID NO:11, (c) a polynucleotide comprising a coding sequence of a cDNA contained within plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433), and (d) a polynucleotide encoding a protein that comprises the amino acid sequence encoded by the cDNA of plasmid pCRII-TMSP3; ~~(e) a polynucleotide which hybridizes under stringent conditions along the full length of a polynucleotide specified in (a) - (d), and (f) a polynucleotide having a nucleic acid sequence that deviates from the nucleic acid sequences specified in (a) - (e) due to the degeneration of the genetic code.~~

70. (Original) An expression vector comprising the polynucleotide of claim 69.

71. (Original) A host cell comprising the expression vector of claim 70.

72-73. (Canceled)

74. (New) A polynucleotide probe selected from the group consisting of:

(a) a first polynucleotide comprising at least 225 contiguous nucleotides of the complete complement of the nucleotide sequence shown in SEQ ID NO:11; and

(b) a second polynucleotide that hybridizes under stringent conditions along the full length of at least 225 contiguous nucleotides of the nucleotide sequence shown in SEQ ID NO:11, wherein the second polynucleotide is at least 70% identical to the at least 225 contiguous nucleotides of the first polynucleotide, wherein the stringent conditions are selected so that the T_m of a hybrid between (b) and the at least 225 contiguous nucleotides of the nucleotide sequence shown in SEQ ID NO:11 is approximately 12-20°C below the T_m of the hybrid calculated according to the formula

$$T_m = 81.5^{\circ}\text{C} - 16.6(\log_{10}[\text{Na}^+]) + 0.41(\%G + C) - 0.63(\%\text{formamide}) - 600/l,$$

where l = the length of the hybrid in basepairs,

wherein use of the polynucleotide probe in a hybridization assay detects a coding sequence for the amino acid sequence shown in SEQ ID NO:12.

75. (New) A polynucleotide probe selected from the group consisting of:

(a) a first polynucleotide comprising at least 225 contiguous nucleotides of the complete complement of the nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3 (ATCC Accession No. PTA-3433); and

(b) a second polynucleotide that hybridizes under stringent conditions along the full length of at least 225 contiguous nucleotides of the nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3, wherein the second polynucleotide is at least 70% identical to the at least 225 contiguous nucleotides of the first polynucleotide, wherein the stringent conditions are selected so that the T_m of a hybrid between (b) and the at least 225 contiguous nucleotides of the nucleotide sequence of the cDNA insert of plasmid pCRII-TMSP3 is approximately 12-20°C below the T_m of the hybrid calculated according to the formula

$$T_m = 81.5^\circ\text{C} - 16.6(\log_{10}[\text{Na}^+]) + 0.41(\%G + C) - 0.63(\%\text{formamide}) - 600/l,$$

where l = the length of the hybrid in basepairs,

wherein use of the polynucleotide probe in a hybridization assay detects a coding sequence for a polypeptide encoded by the cDNA insert of plasmid pCRII-TMSP3.

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76. (New) The polynucleotide probe of claim 74 wherein the second polynucleotide and the at least 225 contiguous nucleotides of the first polynucleotide are at least 75% identical.

77. (New) The polynucleotide probe of claim 74 wherein the second polynucleotide and the at least 225 contiguous nucleotides of the first polynucleotide are at least 90% identical.

78. (New) The polynucleotide probe of claim 74 wherein the second polynucleotide and the at least 225 contiguous nucleotides of the first polynucleotide are at least 96% identical.

79. (New) The polynucleotide probe of claim 74 wherein the second polynucleotide and the at least 225 contiguous nucleotides of the first polynucleotide are at least 98% identical.

80. (New) The polynucleotide probe of claim 75 wherein the second polynucleotide and the at least 225 contiguous nucleotides of the first polynucleotide are at least 75% identical.

81. (New) The polynucleotide probe of claim 75 wherein the second polynucleotide and the at least 225 contiguous nucleotides of the first polynucleotide are at least 90% identical.

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82. (New) The polynucleotide probe of claim 75 wherein the second polynucleotide and the at least 225 contiguous nucleotides of the first polynucleotide are at least 96% identical.

83. (New) The polynucleotide probe of claim 75 wherein the second polynucleotide and the at least 225 contiguous nucleotides of the first polynucleotide are at least 98% identical.
